DISCUSSION OF THE CLAIMS

Support for amended Claim 1 is found in previously presented Claims 1, 6 and 30 and at specification page 14, lines 13-19.

Claims 2-31 have been amended to place the claims in a better format for examination on the merits.

Claims 5-6 and 30 have been canceled.

Claims 11-28 and 31 have been withdrawn.

No new matter has been added.

REMARKS/ARGUMENTS

An embodiment of the present invention relates to:

"A process for depositing, on a substrate, a coating comprising semiconductor material comprising a metal oxide, wherein the metal oxide initiates, under radiation of a suitable wavelength, one or more radical reactions causing oxidation of organic substances and thereby said coating has photocatalytic properties, the process comprising:

depositing the coating having photocatalytic properties by chemical vapor deposition, wherein the reaction and the deposition are carried out at an atmospheric pressure and the deposition is carried out at a temperature below 300°C under an atmosphere comprising a gas mixture that comprises at least one of an organometallic precursor and a metal halide of said metal oxide, the deposition being enhanced by a plasma source" as in amended Claim 1.

The rejection of Claims 1, 9-10 and 29 under 35 U.S.C. 102(b) as being anticipated by Browall et al (US 6,290,180) is traversed.

Browall discloses an optical solar reflector. However, Browall does not disclose or suggest all the limitation as in amended Claim 1.

In detail, Browall does not disclose or suggest depositing the coating having photocatalytic properties by chemical vapor deposition, wherein 1) the reaction and the deposition are carried out at an atmospheric pressure and 2) the deposition is carried out at a temperature below 300°C. In fact, Browall discloses reacting a transition metal oxide with UV radiation under vacuum conditions (see Browall, Example 1, Col.4, lines, 8-13, Example 2, Col.4, lines 43-48, and Example 3, Col. 5, lines 1-5). Furthermore, Browall discloses that "[T]he results revealed that WO_3 is photocatalytically effective in preventing and/or removing organics under vacuum conditions" (see Browall, Example 2, Col. 4, lines 61-63, emphasis added). Thus, in light of teachings by Browall, one of ordinary skill in the art would

not have foreseen the process as in amended Claim 1, particularly wherein the deposition is carried out under an atmospheric pressure.

Therefore, Browall cannot render anticipated or obvious amended Claim 1 and the dependent claims therefrom.

Withdrawal of the rejection is respectfully requested.

The rejection of Claims 1, 3, 7-8, 10 and 29 under 35 U.S.C. 102(b) as being anticipated by Boire et al (US 6,103363) is traversed.

Boire discloses a coated substrate where the coating has titanium oxide. However, Boire does not disclose or suggest depositing the coating having photocatalytic properties by chemical vapor deposition, wherein 1) the reaction and the deposition are carried out at an atmospheric pressure and 2) the deposition is carried out at a temperature below 300°C under an atmosphere comprising a gas mixture that comprises at least one of an organometallic precursor and a metal halide of said metal oxide, the deposition being enhanced by a plasma source.

Particularly, Boire discloses depositing TiO_2 on a substrate at a temperature of 400 to 500°C, emphasizing that "[T]hus, during depostion of TiO_2 by CVD, a crystalline SnO_2:F sublayer promotes the growth of TiO_2 mostly in the rutile form, in particular for deposition temperatures of the order of 400° to 500° C" (see Boire, Col. 6, lines 20-30). Thus, in light of teachings by Boire, one of ordinary skill in the art would not have foreseen the process as in amended Claim 1, particularly wherein the deposition is carried out at a temperature below 300°C.

Therefore, Boire cannot make anticipated or obvious amended Claim 1 and the dependent claims therefrom.

Withdrawal of the rejection is respectfully requested.

The rejection 1-5, 7-9 and 29-30 are rejection under 35 U.S.C. 102(e) as being anticipated by Iacovangelo et al (US 6,890,656) is traversed.

Iacovanelo discloses a structure having a substrate and a titanium oxide layer. However, Iacovanelo does not disclose or suggest depositing the coating having photocatalytic properties by chemical vapor deposition, wherein 1) the reaction and the deposition are carried out at an atmospheric pressure and 2) the deposition is carried out at a temperature below 300°C under an atmosphere comprising a gas mixture that comprises at least one of an organometallic precursor and a metal halide of said metal oxide, the deposition being enhanced by a plasma source.

Particularly, Iacovanelo teaches deposition of TiO_2 carried out under a very low pressure by disclosing that "[A]ll deposition and etching was done at a pressure of 45 mT..." (see Iacovanelo, Col. 7, lines 60-63) where 45 milliTorr is equivalent to 5.9×10^{-5} atmospheric pressure. Thus, in light of teachings by Iacovanelo, one of ordinary skill in the art would not have foreseen the process as in amended Claim 1, particularly wherein the deposition is carried out under an atmospheric pressure.

Therefore, Iacovanelo cannot render anticipated or obvious amended Claim 1 and the dependent claims therefrom.

Withdrawal of the rejection is respectfully requested.

The rejection of Claims 2-8 and 30 under U.S.C. 103(a) as being unpatentable over Browall in view of Iacovangelo is traversed.

The secondary reference to Iacovangelo can not cure the deficiencies of Browall because as discussed above, neither Browall nor Iacovangelo disclose or suggest the process as in amended Claim 1, particularly wherein the deposition is carried out under an atmospheric pressure.

Withdrawal of the rejection is respectfully requested.

The rejection of Claims 2, 4-6, 9 and 30 under U.S.C. 103(a) as being unpatentable over Boire in view of Iacovangelo is traversed.

As discussed above, Boire does not disclose or suggest the process as in amended Claim 1, particularly wherein the reaction and the deposition are carried out at an atmospheric pressure. Iacovangelo discloses deposition of TiO_2 carried out under a very low pressure of 45 mT. Thus, in light of teachings by Boire in combination with Iacovangelo, one of ordinary skill in art would not have foreseen the process as in amended Claim 1, particularly, wherein the deposition is carried out under an atmospheric pressure.

Therefore, Boire in combination with Iacovangelo cannot render obvious amended Claim 1 and the dependent claims therefrom.

Withdrawal of the rejection is respectfully requested.

The rejection of Claims 1-10 and 29-30 under 35 U.S.C. 112, second paragraph is believed to be obviated by the present Amendment.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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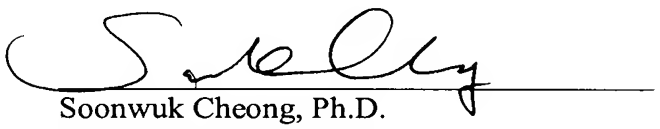

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